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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,215	05/24/2001	Hitesh Trivedi	Q01-1064-US1	2590

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FISH & RICHARDSON PC
225 FRANKLIN ST
BOSTON, MA 02110

EXAMINER

TZENG, FRED

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 01/12/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/865,215

Applicant(s)

TRIVEDI, HITESH

Examiner

Fred Tzeng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 12-15, 18-24 and 31-39 is/are rejected.
- 7) ☒ Claim(s) 6-9, 16, 17 and 25-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in responsive to the amendment communication filed on October 01, 2003. This amendment has been entered and carefully considered. Claims 1-10, 12-39 are currently pending with claims 3, 5, 6, 10, 14 and 15 being amended and claims 16-39 newly added.

Claim Objections

2. Claim 23 is objected to because of the following informalities: Claim 23 is a method claim, but depending on an apparatus claim 22. Appropriate correction is required.

3. Claim 27 is objected to because of the following informalities: Claim 27 is an apparatus claim, but depending on a method claim 24. Appropriate correction is required.

4. Claims 1, 14 and 15 are objected to because of the following informalities: "data" and "data track" are not clearly defined and being ambiguous. Is the "data" an user data or a servo data? Similarly, is the "data track" an user data track or a servo data track? Appropriate corrections are required.

Response to Arguments

5. Applicant's arguments with respect to claims 1-10, 12-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 10, 12-15, 18-24, 31-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nute et al (USPN 6,108,159) in view of Despain et al (USPN 6,594,103).

Regarding claims 1, 14 and 15, Nute discloses a method of controlling a data head for reading data from a data track on a magnetic tape in a magnetic tape drive (see column 1 lines 39-45, i.e., positioning a head by following/reading a contour of an edge of a data track in a magnetic tape drive).

However, Nute does not specifically disclose determining signal quality for read data signals produced by a data head reading data from a data track and adjusting the position of the data head relative to the data track using the signal quality.

Despain teaches performing servo operations on the basis of quality of data signal being read from data track from storage surface of a disk within a hard disk drive (see column 10 lines 2-15).

Nute and Despain are combinable because they are from the same field of endeavor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Despain's teaching (see above) into Nute's

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system in order to improve a magnetic tape drive's user data storage capacity while maintaining low positioning error. Because Despain's teaching eliminated the need for recorded servo information. As a result it increase user data storage capacity, simplification of the servo positioning mechanism.

Regarding claims 2 and 21, Nute discloses performing a seek operation that includes changing the position of the data head and determining changes in the signal quality corresponding to the changes in data head position until a predetermined level of improvement in the signal quality is achieved (see column 2 lines 2-10).

Regarding claims 3 and 22, Nute discloses changing the position of the data head comprises: stepping of the data head laterally across the data track (see column 1 lines 15-27 and column 3 line 66 – column 4 line 12 or figure 1).

Regarding claims 4, 5, 23 and 24, Nute discloses that performing the seek operation further comprises: using the determined changes to determine direction and size of steps of the stepping (see column 4 lines 21-30).

Regarding claims 10, 18, 31, 34 and 37, Nute discloses obtaining the signal quality from a read channel device (see column 2 lines 26-32).

Regarding claims 12, 13, 32 and 33, Nute discloses that the signal quality comprises error values and the error values are indicative of error between observed values and ideal values for the read data (see column 2 lines 2-10).

Regarding claims 19, 35 and 38, Nute discloses that the read data signal do not include servo information (see column 1 lines 39-45).

Regarding claims 20, 36 and 39, Nute discloses adjusting comprises aligning the data head with the data track (see column 1 lines 60-66 and column 2 lines 33-39).

Allowable Subject Matter

8. Claims 6-9, 16, 17, 25-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (formal communications, please mark

"EXPEDITED PROCEDURE")

Or:

(703) 308-6606 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021

Crystal Drive, Arlington. V.A., Sixth Floor (receptionist).

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Tzeng whose telephone number is 703-305-4841.

The examiner can normally be reached on weekdays from 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 703-308-4825. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-5710 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Fred F. Tzeng

F.T.

January 09, 2004



DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600